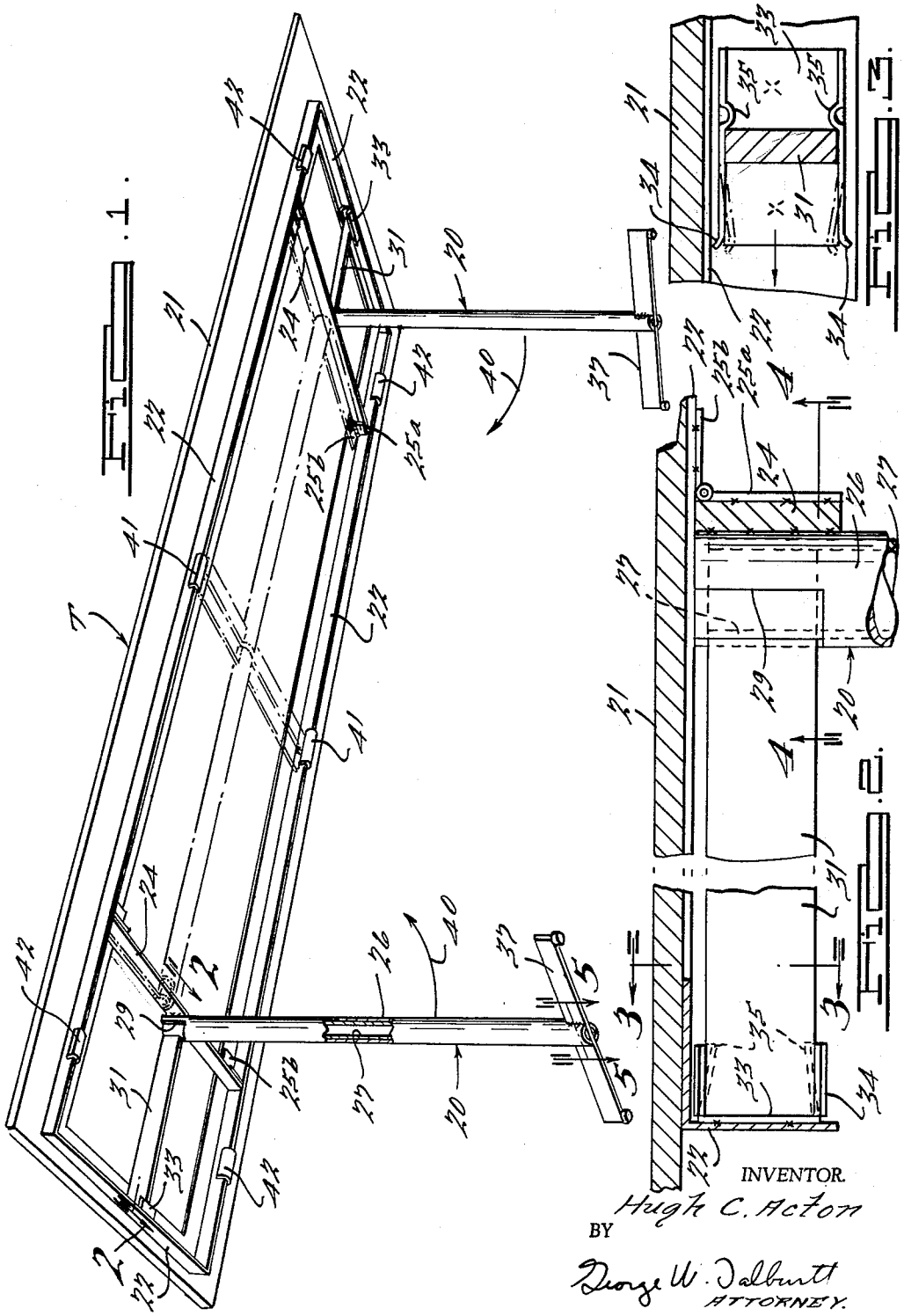
Jan. 19, 1965 H. C. ACTON 3,166,029

FOLDING TABLE

Filed July 25, 1962 3 Sheets-Sheet 1



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FOLDING TABLE

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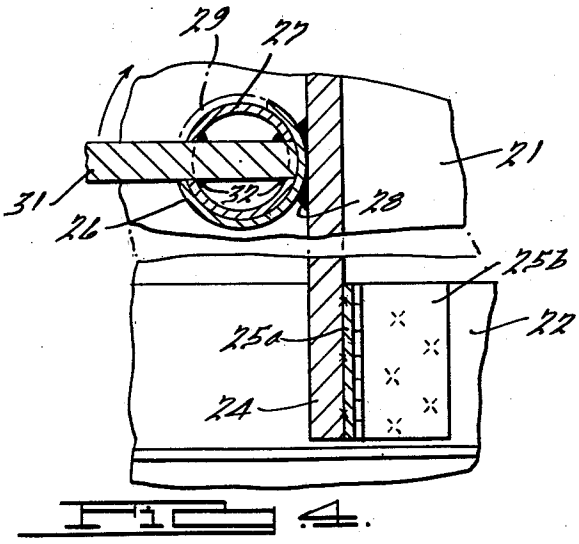

FIG. 4.

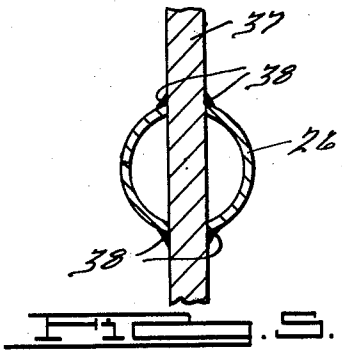

FIG. 5.

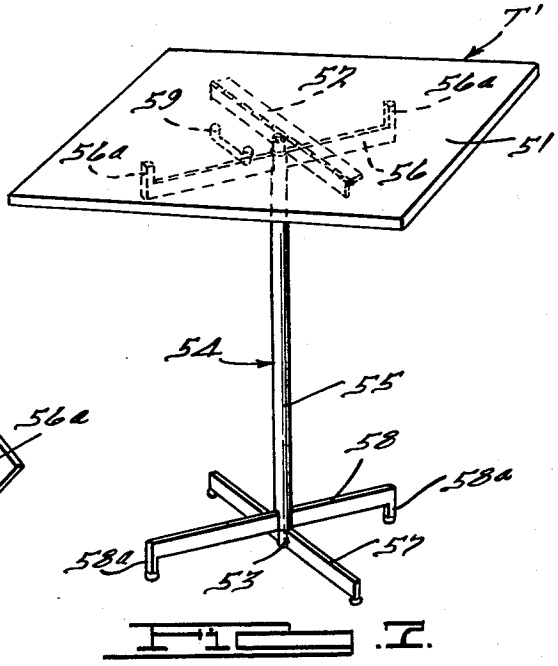

FIG. 7.

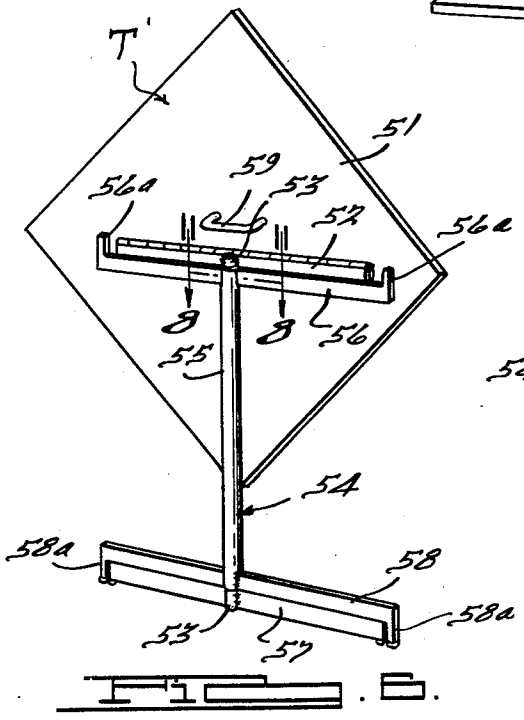

FIG. 6.

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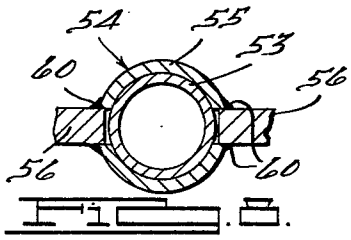

FIG. 8.

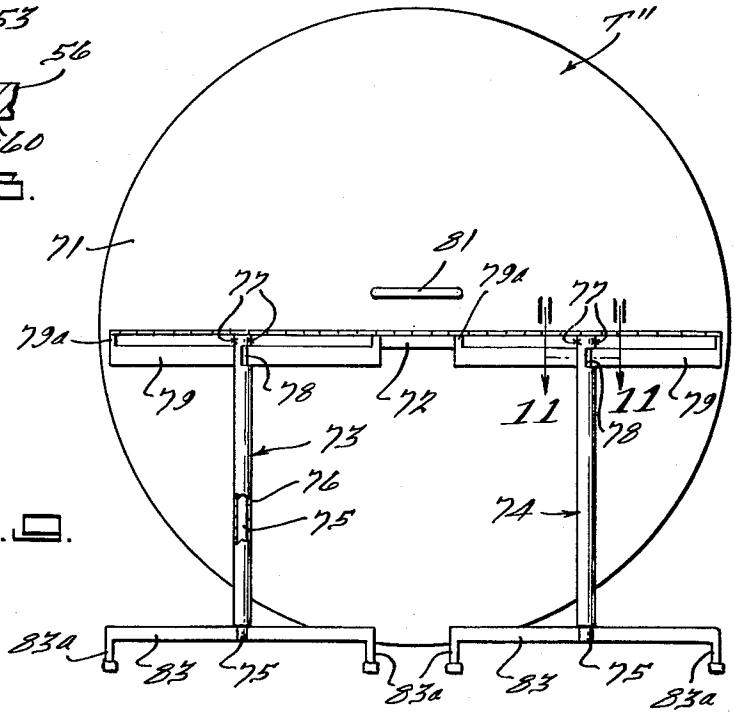

FIG. 9.

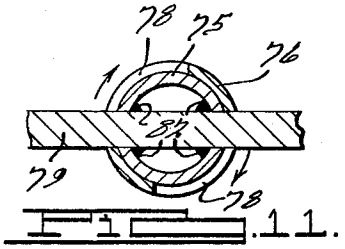

FIG. 11.

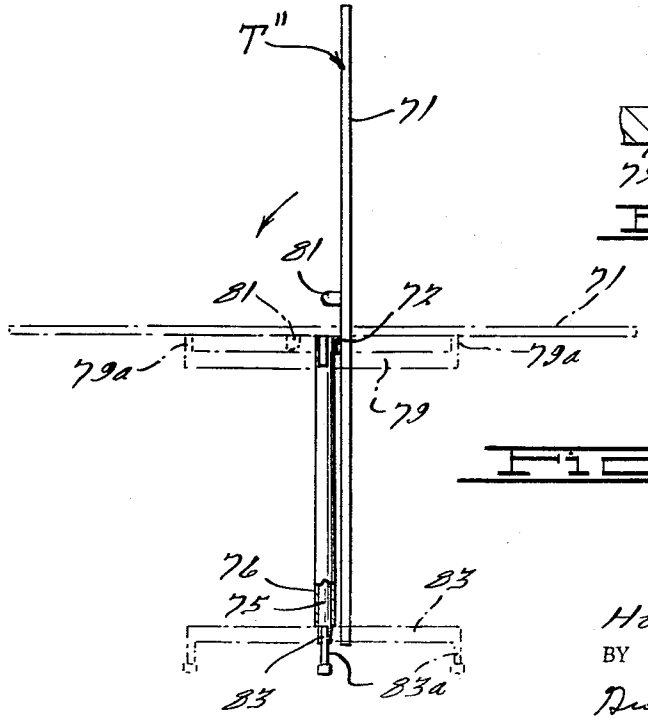

FIG. 10.

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FOLDING TABLE

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10 Claims. (Cl. 108—124)

This invention relates to folding tables and is particularly concerned with folding tables having rotatable support legs associated with a pedestal type table support.

It is a primary object of this invention to provide a folding table that utilizes a pedestal support hingedly connected to the table top underside and arranged to be collapsed against the table top underside for storage purposes.

It is still another object of this invention to provide a folding table that can be constructed from a minimum of commercially available, relatively inexpensive elements arranged in a novel manner so as to provide a functional yet extremely ornamental furniture piece in either its erected or collapsed condition.

Other objects and advantages of this invention will be readily apparent from a reading of the following description and a consideration of the related drawings wherein:

FIG. 1 is a perspective view, with parts broken away and shown in section, of one form of this invention;

FIG. 2 is an enlarged, fragmentary sectional elevational view, taken along the line 2—2 of FIG. 1;

FIG. 3 is another enlarged, fragmentary sectional elevational view, taken along the line 3—3 of FIG. 2;

FIG. 4 is another enlarged, fragmentary sectional elevational view, taken along the line 4—4 of FIG. 2;

FIG. 5 is another enlarged, fragmentary sectional elevational view, taken along the line 5—5 of FIG. 1;

FIG. 6 is a perspective view of a folding table embodying a modified form of this invention, the table being shown in its collapsed position;

FIG. 7 is a perspective view of the FIG. 6 table in erected position;

FIG. 8 is an enlarged sectional elevational view taken along the line 8—8 of FIG. 6;

FIG. 9 is a rear elevational view of another modified form of table embodying this invention showing the table in collapsed condition;

FIG. 10 is an end elevational view of the table shown in FIG. 9; and

FIG. 11 is an enlarged, fragmentary sectional elevational view taken along the line 11—11 of FIG. 9.

The several forms of folding tables shown in the drawings are each provided with a folding pedestal-type support that may be collapsed so as to permit the tables to be stored in a decorative, space conserving condition. Common to each of the several forms of folding tables disclosed is the hingedly mounted pedestal support that includes a pair of relatively rotatable, concentrically arranged tubes or rods or pipe sections. At least one of the pair of concentrically arranged support tubes or pipes mounts a leg or arm section that is swingable about the the tube longitudinal axis through a ninety degree (90°) arc so as to permit movement of the table support pedestal to either its erected or collapsed positions.

Looking first at the form of this invention shown in FIGS. 1–5, it will be noted that a table T is disclosed having a pair of longitudinally spaced, pedestal-type supports 20 that are adapted to support the table top 21 in a table erected position. Support 20 may be folded against the underside of the table top 21 when the table is to be collapsed. Table top 21 has a rigidifying, rectangularly shaped frame 22 depending from its underside. The frame 22 may be formed from angle type stock as clearly shown in FIG. 2. Extending across the width of the

underside of the table-top 21, adjacent each end thereof, is a hinge plate or strip 24. Hinge plate 24 is welded at each of its ends to one leaf 25*a* (see FIG. 2) of a hinge that has its other leaf 25*b* welded to the rigidifying frame 22. Welded or otherwise fixedly secured to the outer side of the hinge plate 24 is the outer tube 26 of the pair of tubes 26, 27 forming the pedestal support 20. FIG. 4 shows the welded connection 28 that fixes the outer tube 26 to the hinge strap 24. From FIGS. 1, 2 and 4 it is clear that the upper end of outer tube 26 has a circumferentially extending slot 29 therein that extends over an arc of approximately ninety degrees (90°). This slot 29 is to provide for swinging movement of the swing arm 31 that is fixed to the inner tube 27 so as to project radially therefrom. Swing arm 31 may project through the inner tube 27 and be welded to the interior of the tube 27 as shown at 32 in FIG. 4. The outer end of swing arm 31 is adapted to be frictionally engaged by a snap catch 33 that is also welded to the frame 22. From FIG. 3 it will be noted that the snap catch 33 has a pair of spring arms 34 each of which has an abutment ridge 35. The arms 34 are cammed apart when the outer end of the swing arm 31 is moved into latching engagement with the catch 33. The lower end of the outer tube 26 is slotted to receive the cross bar 37 that provides the pedestal foot. The cross bar 37 can be anchored to the pedestal outer tube 26 by welding 38 or any other attachment means as clearly shown in FIG. 5.

From the foregoing it is believed to be clear that when the table T is in its erected position, as shown in FIG. 1, that the engagement of the outer end of the swing arm 31 in the catch 33 will anchor the pedestal 20 in its erected vertical position. To collapse the table T it is merely necessary to rotate the swing arm 31 clockwise (FIG. 1) through an arc of about ninety degrees (90°). When swing arm 31 is disengaged from the snap catch 33 then the pedestal 20 can be swung up against the underside of the table 21 as indicated by the arrowed arcs 40. Snap catches 41 can be provided to latchingly retain the pedestal cross bars 37 in their collapsed position against the underside of the table top 21.

As the pedestals 20 at opposite ends of the table T are identical a detailed description of only one pedestal has been given. The underside frame 22 on table top 21 can mount spaced bumpers or cushion strips 42 that facilitate stacking of the collapsed table without damage thereto.

In the form of this invention shown in FIGS. 6–8 the table top 51 of table T′ is connected to one leaf of a hinge strip 52 while the other leaf of the hinge strip is welded or otherwise secured to the upper end of the inner tube 53 of the concentric tube pedestal support 54. The upper end of the outer tube 55 has the cross bar 56 fixed thereto by any conventional means. The cross bar 56 may be a two-piece unit that is received in slots in the outer tube 55 and welded in position as shown at 60 in FIG. 8. Cross bar 56 has upwardly extending end projections 56*a* as shown. The lower end of the inner tube 53 is slotted to receive the foot bar 57. The lower end of the outer tube 55 may have a foot bar 58 connected thereto in the same manner as shown in FIG. 8. Foot bar 58 has end extensions 58*a*. The underside of the table top 51 can have a U-shaped handle 59 mounted thereon to facilitate rotation of the table top on its hinged support.

It is thought to be clear from FIGS. 6 and 7 that when the table T′ is in its collapsed position shown in FIG. 6 that then the lower cross bars 57, 58 nest as do the hinge strip 52 and the upper cross bar 56. The function of the legs 56*a* and 58*a* is obvious and is not thought to require description. When collapsed in the manner shown in

FIG. 6, it is obvious that the table T' may be placed against a wall or the like and used as a decorative screen, particularly if the table top **51** is formed with a decorative design. The minimum space required for a collapsed table of this type is a particular advantage if a large number of tables of this type have to be collapsed and stored between use.

To erect the table T' it is merely necessary to grip the handle **59** and swing the table top **51** to a horizontal position after which the rotatable lower cross bar **58** may be swung through a ninety degree arc to the position shown in FIG. 7. In the FIG. 7 position the upper cross bar **56**, which is fixedly attached to the lower cross bar **58** by the outer tube **55**, will lock the table top **51** in its horizontal position. The handle **59** is of the same height as the hinge strap **52** so it nests in the space in cross bar **58** formerly occupied by the hinge strap **52**. From the foregoing description it is obvious that it is a simple operation to either erect or collapse this folding table.

The form of the invention shown in FIGS. 9–11 is more or less a combination of the previously described two forms of tables T and T'. The table T'' shown in FIGS. 9–11 is preferably formed with a relatively large size table top **71** that has one leaf of a hinge strip **72** connected across its underside. The other leaf of the hinge strip **72** is connected at spaced points along its length to the upper ends of the pedestal supports **73** and **74** which are identical. The pedestals **73** and **74** are formed from a pair of concentrically arranged tubes or pipes **75** and **76**. The outer tube **76** is welded at **77** to the hinge strip **72**. The outer tube **76** (see FIG. 11) is provided with a pair of oppositely disposed, ninety degree (90°) arcuate slots **78** for a purpose that will become apparent hereafter. Extending through the slots **78** and through the upper end of the inner tube **75** is an upper cross bar **79**. Cross bar **79** is formed with upstanding feet **79***a* at its opposite ends. These feet are arranged to seat against the underside of the table top **71** when the table top **71** is moved to its erected horizontal position shown in broken lines in FIG. 10. The cross bar **79** can be fixed to the upper end of inner tube **75** by welding **82** or any other type of conventional attachment means. The lower end of inner tube **75** is slotted to receive a lower cross bar **83** and the same kind of welded connection **82** can be used to anchor the lower cross bar **83** to the lower end of tube **75** as is shown in FIG. 11 for anchoring the upper cross bar **79** to the inner tube **75**. It is thought to be obvious that the hinge strip **72** should preferably extend across the middle of the table top underside as shown if the pedestal supports **73, 74** are to be substantially centered with respect to the table top area. Obviously an off-center relationship can also be used with the structure herein disclosed. The lower cross bar **83** can be formed with legs **83***a* also and then the same bar element can be used for both the upper and lower cross bars.

Erection of the table T'' shown in FIGS. 9–11 is similar to the procedure used to erect the table T' shown in FIGS. 6–8. First the handle **81** projecting from the underside of table top **71**, is grasped and the table top **71** pivoted about the hinge strip **72** to a horizontal position. Then either the upper or lower cross bars **79** or **83** can be turned through a ninety degree (90°) arc and the upper cross bars **79** will then be positioned to extend transversely across the hinge axis so as to support the table top in its horizontal position as shown in broken lines in FIG. 10.

I claim:

1. A folding table comprising a table top, a hinge mechanism connected to the underside of the table top at about the center thereof, a pedestal support for the table top having its upper end connected to said hinge mechanism, said pedestal support comprising a pair of concentrically arranged, relatively rotatable, tubes with the upper end of one of said tubes being fixedly connected to said hinge mechanism, a cross bar projecting radially from and fixedly connected to the upper end of the other of said tubes and arranged to rotate through a substantial angle of approximately ninety degrees beneath the table top, and a cross bar mounted on the lower end of said pedestal support, said table top being rotatable about said hinge mechanism from a substantially vertical position to a substantially horizontal position.

2. A folding table comprising a table top, a hinge mechanism connected to the underside of the table top at about the center thereof, a pedestal support for the table top having its upper end connected to said hinge mechanism, said pedestal support comprising a pair of concentrically arranged, relatively rotatable, tubes with the upper end of one of said tubes being fixedly connected to said hinge mechanism, a cross bar projecting radially from and fixedly connected to the upper end of the other of said tubes and arranged to rotate through a substantial angle, and a cross bar mounted on the lower end of said pedestal support, said table top being rotatable about said hinge mechanism from a substantially vertical position to a substantially horizontal position.

3. A folding table comprising a table top, a hinge mechanism connected to the underside of the table top at about the center thereof, a pedestal support for the table top having its upper end connected to said hinge mechanism, said pedestal support comprising a pair of concentrically arranged, relatively rotatable, tubes with the upper end of one of said tubes being fixedly connected to said hinge mechanism, a cross bar projecting radially from and fixedly connected to the upper end of the other of said tubes and arranged to rotate through a substantial angle, and a cross bar mounted on the lower end of said pedestal support.

4. A folding table comprising a table top, a pair of hinge mechanisms connected to the underside of the table top at spaced apart locations, a pedestal support connected to each of said hinge mechanisms, said pedestal supports each comprising a pair of concentrically arranged, relatively rotatable tubes, one of said tubes having the upper end fixedly connected to the associated hinge mechanism and the other of said tubes having the upper end provided with a radially extending cross bar arranged to be swung between a position extending transversely of the table top to a position extending longitudinally of the table top, latch means to anchor said radially extending swingable cross bar in its position extending longitudinally of the table top, and a cross bar fixedly connected to the bottom end of each of said pedestal supports, said pedestal supports being swingable into a position adjacent the table top underside.

5. A folding table comprising a table top, a pair of hinge mechanisms connected to the underside of the table top at spaced apart locations, a pedestal support connected to each of said hinge mechanisms, said pedestal supports each comprising a pair of concentrically arranged, relatively rotatable tubes, one of said tubes having the upper end fixedly connected to the associated hinge mechanism and the other of said tubes having the upper end provided with a radially extending cross bar arranged to be swung between a position extending transversely of the table top to a position extending longitudinally of the table top, and a cross bar fixedly connected to the bottom end of each of said pedestal supports, said pedestal supports being swingable into a position adjacent the table top underside.

6. A folding table comprising a table top having a hinge strip having one leaf fastened to and extending across the central portion of the table top underside, a pedestal support for said table top comprising a pair of concentrically arranged, relatively rotatable tubes with the upper end of one of said tubes fixedly connected to the movable leaf of said hinge mechanism, the upper end of the other tube having a cross bar fixedly connected thereto and arranged to extend radially therefrom and to swing circumferentially around said pedestal support through a limited arc, and a cross bar fixedly connected to at least one of said tubes at the lower end thereof and arranged

to be swung between positions parallel to and transverse to said hinge strip.

7. A folding table comprising a table top having a hinge strip having one leaf fastened to and extending across the central portion of the table top underside, a pedestal support for said table top comprising a pair of concentrically arranged, relatively rotatable tubes with the upper end of one of said tubes fixedly connected to the movable leaf of said hinge mechanism, the upper end of the other tube having a cross bar fixedly connected thereto and arranged to extend radially therefrom and to swing circumferentially around said pedestal support through a limited arc, and a cross bar fixedly connected to each of said tubes at the lower end thereof and arranged to be swung between positions parallel and transverse to one another.

8. A folding table comprising a table top having a hinge strip having one leaf fastened to and extending across the central portion of the table top underside, a pedestal support for said table top comprising a pair of concentrically arranged, relatively rotatable tubes with the upper end of one of said tubes fixedly connected to the movable leaf of said hinge mechanism, the upper end of the other tube having a cross bar fixedly connected thereto and arranged to extend radially therefrom and to swing circumferentially around said pedestal support through a limited arc, and a cross bar fixedly connected to each of said tubes at the lower end thereof and arranged to be swung between positions parallel and transverse to one another, said cross bars at the lower end of the tubes being arranged to nest in one another when they are in parallel positions.

9. A folding table comprising a table top having a hinge strip having one leaf fastened to and extending across the central portion of the table top underside, a pedestal support for said table top comprising a pair of concentrically arranged, relatively rotatable tubes with

the upper end of one of said tubes fixedly connected to the movable leaf of said hinge mechanism, the upper end of the other tube having a cross bar fixedly connected thereto and arranged to extend radially therefrom and to swing circumferentially around said pedestal support through a limited arc, a cross bar fixedly connected to each of said tubes at the lower end thereof and arranged to be swung between positions parallel and transverse to one another, said cross bars at the lower end of the tubes being arranged to nest in one another when they are in parallel positions, and a handle attached to the underside of said table top to facilitate pivoted movement of the table top about the hinge strip fixed to the upper end of the pedestal support.

10. A folding table comprising a table top, a hinge strip fixed to its underside and extending across the central portion thereof, a pair of spaced apart pedestal supports for said table top comprising pairs of concentrically arranged, relatively rotatable pipes with the upper end of each outer pipe fixed to the hinge strip and the lower end of each inner pipe carrying a cross bar foot piece, the upper end of each inner pipe having a cross bar attached thereto and projecting through diametrically opposed, circumferentially extending slots in the upper end of the outer pipe, said inner pipe being rotatable relative to the outer pipe when the table top is in a horizontal position.

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